



SEQUENCE LISTING

<110> Thompson, Penny J.
Sheppard, Paul O.

<120> Uses of Human Zven Antagonists

<130> 02-22

<140> 10/680,755

<141> 2003-10-07

<150> 60/416,719

<151> 2002-10-07

<150> 60/416,718

<151> 2002-10-07

<150> 60/434,116

<151> 2002-12-16

<150> 60/433,918

<151> 2002-12-16

<150> 60/508,614

<151> 2003-10-03

<150> 60/508,603

<151> 2003-10-03

<160> 29

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1496

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (66)...(389)

<400> 1

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gcgcc atg agg agc ctg tgc tgc gcc cca ctc ctg ctc ctc ttg ctg ctg 110

Met Arg Ser Leu Cys Cys Ala Pro Leu Leu Leu Leu Leu Leu

1 5 10 15

ccg ccg ctg ctg ctc acg ccc cgc gct ggg gac gcc gcc gtg atc acc 158

Pro Pro Leu Leu Leu Thr Pro Arg Ala Gly Asp Ala Ala Val Ile Thr

20 25 30

ggg gct tgt gac aag gac tcc caa tgt ggt gga ggc atg tgc tgt gct 206

Gly	Ala	Cys	Asp	Lys	Asp	Ser	Gln	Cys	Gly	Gly	Gly	Met	Cys	Cys	Ala		
			35					40					45				
gtc	agt	atc	tgg	gtc	aag	agc	ata	agg	att	tgc	aca	cct	atg	ggc	aaa		254
Val	Ser	Ile	Trp	Val	Lys	Ser	Ile	Arg	Ile	Cys	Thr	Pro	Met	Gly	Lys		
		50					55				60						
ctg	gga	gac	agc	tgc	cat	cca	ctg	act	cgt	aaa	gtt	cca	ttt	ttt	ggg		302
Leu	Gly	Asp	Ser	Cys	His	Pro	Leu	Thr	Arg	Lys	Val	Pro	Phe	Phe	Gly		
	65					70					75						
cgg	agg	atg	cat	cac	act	tgc	cca	tgt	ctg	cca	ggc	ttg	gcc	tgt	tta		350
Arg	Arg	Met	His	His	Thr	Cys	Pro	Cys	Leu	Pro	Gly	Leu	Ala	Cys	Leu		
	80				85				90					95			
cgg	act	tca	ttt	aac	cga	ttt	att	tgt	tta	gcc	caa	aag	taatcgctct				399
Arg	Thr	Ser	Phe	Asn	Arg	Phe	Ile	Cys	Leu	Ala	Gln	Lys					
				100					105								
ggagtagaaa	ccaaatgtga	atagccacat	cttacctgta	aagtcttact	tgtgattgtg												459
ccaaacaaaa	aatgtgccag	aaagaaatgc	tcttgcttcc	tcaactttcc	aagtaacatt												519
tttatctttg	atttgtaaat	gatttttttt	ttttttttta	tcgaaagaga	attttacttt												579
tggatagaaa	tatgaagtgt	aaggcattat	ggaactgggt	cttattttccc	tgtttgtgtt												639
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tccagctttt	tgctggcatt	taaatagtga	aaagagtgtg	tatgtgaact	tgacactcca												999
aactcctgtc	atggcacgga	agctaggagt	gctgctggac	ccttcctaaa	cctgtcactc												1059
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ttttactttt	tataaagttt	tttttcctta	gtctcctact	tagagatatt	ctagaaaatg												1239
tcacttgaag	aggaagtatt	tattttaatc	tggcacaaca	ctaattacca	tttttaaagc												1299
ggtattaagt	tgtaatttaa	accttgtttg	taactgaaag	gtcgattgta	atggattgcc												1359
gtttgtacct	gtatcagtat	tgctgtgtaa	aaattctgta	tcagaataat	aacagtactg												1419
tatatcattt	gatttatttt	aatattatat	ccttattttt	gtcaaaaaaa	aaaaaaaaaa												1479
aaaaatatgc	ggccgcg																1496

<210> 2

<211> 108

<212> PRT

<213> Homo sapiens

<400> 2

Met	Arg	Ser	Leu	Cys	Cys	Ala	Pro	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Pro		
1				5					10					15			
Pro	Leu	Leu	Leu	Thr	Pro	Arg	Ala	Gly	Asp	Ala	Ala	Val	Ile	Thr	Gly		
		20						25					30				
Ala	Cys	Asp	Lys	Asp	Ser	Gln	Cys	Gly	Gly	Gly	Met	Cys	Cys	Ala	Val		
	35						40				45						
Ser	Ile	Trp	Val	Lys	Ser	Ile	Arg	Ile	Cys	Thr	Pro	Met	Gly	Lys	Leu		
	50					55				60							
Gly	Asp	Ser	Cys	His	Pro	Leu	Thr	Arg	Lys	Val	Pro	Phe	Phe	Gly	Arg		
65					70					75					80		
Arg	Met	His	His	Thr	Cys	Pro	Cys	Leu	Pro	Gly	Leu	Ala	Cys	Leu	Arg		
				85					90					95			

Thr Ser Phe Asn Arg Phe Ile Cys Leu Ala Gln Lys
 100 105

<210> 3
 <211> 324
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> This degenerate sequence encodes the amino acid
 sequence of SEQ ID NO:2.

<221> misc_feature
 <222> (1)...(324)
 <223> n = A,T,C or G

<400> 3
 atgmgnwsny tntgytgygc nccnytnytn ytnytnytny tnytnccncc nytnytnytn 60
 acnccnmngng cnggngaygc ngcngtnath acnggngcnt gygayaarga ywsncartgy 120
 ggnggnggna tgtgytgygc ngtnwsnath tgggtnaarw snathmgnat htgyacnccn 180
 atgggnaary tnggngayws ntgycayccn ytnacnmgna argtnccntt yttyggnmgn 240
 mgnatgcayc ayacntgycc ntgyytnccn ggnytnngcnt gyytnmgnac nwsnttyaay 300
 mgnttyatht gyytngcnca raar 324

<210> 4
 <211> 1409
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (91)...(405)

<400> 4
 tggcctcccc agcttgccag gcacaaggct gagcgggagg aagcgagagg catctaagca 60
 ggcagtgttt tgccttcacc ccaagtgacc atg aga ggt gcc acg cga gtc tca 114
 Met Arg Gly Ala Thr Arg Val Ser
 1 5

atc atg ctc ctc cta gta act gtg tct gac tgt gct gtg atc aca ggg 162
 Ile Met Leu Leu Leu Val Thr Val Ser Asp Cys Ala Val Ile Thr Gly
 10 15 20

gcc tgt gag cgg gat gtc cag tgt ggg gca ggc acc tgc tgt gcc atc 210
 Ala Cys Glu Arg Asp Val Gln Cys Gly Ala Gly Thr Cys Cys Ala Ile
 25 30 35 40

agc ctg tgg ctt cga ggg ctg cgg atg tgc acc ccg ctg ggg cgg gaa 258
 Ser Leu Trp Leu Arg Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu
 45 50 55

ggc gag gag tgc cac ccc ggc agc cac aag gtc ccc ttc ttc agg aaa 306
 Gly Glu Glu Cys His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys
 60 65 70

cgc aag cac cac acc tgt cct tgc ttg ccc aac ctg ctg tgc tcc agg 354

Arg Lys His His Thr Cys Pro Cys Leu Pro Asn Leu Leu Cys Ser Arg
75 80 85

ttc ccg gac ggc agg tac cgc tgc tcc atg gac ttg aag aac atc aat 402
Phe Pro Asp Gly Arg Tyr Arg Cys Ser Met Asp Leu Lys Asn Ile Asn
90 95 100

ttt taggcgcttg cctgggtctca ggataccac catccttttc ctgagcacag 455
Phe
105

cctggatttt tatttctgcc atgaaacca gctcccatga ctctcccagt ccctacactg 515
actaccctga tctctcttgt ctagtacgca catatgcaca caggcagaca tacctcccat 575
catgacatgg tccccaggct ggcctgagga tgtcacagct tgaggctgtg gtgtgaaagg 635
tggccagcct gggtctcttc cctgctcagg ctgccagaga ggtggtaaat ggcagaaagg 695
acattccccc tcccccccc aggtgacctg ctctctttcc tgggccctgc ccctctcccc 755
acatgtatcc ctccgtctga attagacatt cctgggcaca ggctcttggg tgcatgtctc 815
agagtcccag gtccctggct gaccctcagg cccttcacgt gaggtctgtg aggaccaatt 875
tgtgggtagt tcatcttccc tcgattgggt aactccttag ttccagacca cagactcaag 935
attggctctt cccagagggc agcagacagt caccccaagg cagggtgtagg gagcccaggg 995
aggccaatca gccccctgaa gactctgggt ccagtcagcc tgtggcttgt ggcctgtgac 1055
ctgtgacctt ctgccagaat tgatcatgct ctgaggcccc ctcttaccac actttaccag 1115
ttaaccactg aagcccccaa ttcccacagc ttttccatta aaatgcaaat ggtggtggtt 1175
caatctaate tgatattgac atattagaag gcaattaggg tgtttcccta aacaactcct 1235
ttccaaggat cagccctgag agcagggttg tgactttgag gagggcagtc ctctgtccag 1295
attgggtggg gagcaaggga cagggagcag ggcaggggct gaaaggggca ctgattcaga 1355
ccagggaggc aactacacac caacctgctg gctttagaat aaaagcacca actg 1409

<210> 5
<211> 105
<212> PRT
<213> Homo sapiens

<400> 5
Met Arg Gly Ala Thr Arg Val Ser Ile Met Leu Leu Leu Val Thr Val
1 5 10 15
Ser Asp Cys Ala Val Ile Thr Gly Ala Cys Glu Arg Asp Val Gln Cys
20 25 30
Gly Ala Gly Thr Cys Cys Ala Ile Ser Leu Trp Leu Arg Gly Leu Arg
35 40 45
Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys His Pro Gly Ser
50 55 60
His Lys Val Pro Phe Phe Arg Lys Arg Lys His His Thr Cys Pro Cys
65 70 75 80
Leu Pro Asn Leu Leu Cys Ser Arg Phe Pro Asp Gly Arg Tyr Arg Cys
85 90 95
Ser Met Asp Leu Lys Asn Ile Asn Phe
100 105

<210> 6
<211> 315
<212> DNA
<213> Artificial Sequence

<220>
<223> This degenerate sequence encodes the amino acid

sequence of SEQ ID NO:5.

<221> misc_feature
<222> (1)...(315)
<223> n = A,T,C or G

<400> 6
atgmngngng cnacnmngnt nwsnathatg ytnytnytng tnacngtnws ngaytgygcn 60
gtnathacng gngcntgyga rmngaygtn cartgyggng cnggnacntg ytgygcnath 120
wsnytntggy tnmngngnyt nmgnatgtgy acncnytnng gnmngngargg ngargartgy 180
cayccnggnw sncayaargt nccnttytty mgnaarmgna arcaycayac ntgyccntgy 240
ytnccnaayy tnytnntyws nmgnattyccn gayggngmgt aymngntyws natggayytn 300
aaraayatha aytty 315

<210> 7
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide linker.

<400> 7
Gly Gly Ser Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 8
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Motif.

<221> VARIANT
<222> (8)...(8)
<223> Xaa is Asp or Glu.

<221> VARIANT
<222> (9)...(9)
<223> Xaa is Lys or Arg.

<221> VARIANT
<222> (1)...(10)
<223> Xaa = Any Amino Acid

<221> VARIANT
<222> (1)...(10)
<223> Xaa = Any Amino Acid

<400> 8
Ala Val Ile Thr Gly Ala Cys Xaa Xaa Asp
1 5 10

<210> 9

<211> 23
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Motif.

<221> VARIANT
 <222> (4)...(4)
 <223> Xaa is Gly or Leu.

<221> VARIANT
 <222> (5)...(5)
 <223> Xaa is Ser or Thr.

<221> VARIANT
 <222> (6)...(6)
 <223> Xaa is His or Arg.

<221> VARIANT
 <222> (12)...(12)
 <223> Xaa is any amino acid.

<221> VARIANT
 <222> (13)...(13)
 <223> Xaa is Lys or Arg.

<221> VARIANT
 <222> (15)...(15)
 <223> Xaa is any amino acid.

<400> 9
 Cys His Pro Xaa Xaa Xaa Lys Val Pro Phe Phe Xaa Xaa Arg Xaa His
 1 5 10 15
 His Thr Cys Pro Cys Leu Pro
 20

<210> 10
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Glu-Glu tag

<400> 10
 Glu Tyr Met Pro Met Glu
 1 5

<210> 11
 <211> 249
 <212> DNA
 <213> Homo sapiens

<400> 11
 atggccgtga tcaccggggc ttgtgacaag gactcccaat gtggtggagg catgtgctgt 60

```

gctgtcagta tctgggtcaa gagcataagg atttgcacac ctatgggcaa actgggagac 120
agctgccatc cactgactcg taaagttcca ttttttgggc ggaggatgca tcacacttgc 180
ccgtgtctgc caggcttggc ctgtttacgg acttcattta accgatttat ttgttttagcc 240
caaaagtaa 249

```

```

<210> 12
<211> 68
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> oligonucleotide primer ZC40821

```

```

<400> 12
ctagaaataa ttttgttttaa ctttaagaag gagatatata tatggccgtg atcaccgggg 60
cttgtgac 68

```

```

<210> 13
<211> 67
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> oligonucleotide primer ZC40813

```

```

<400> 13
tctgtatcag gctgaaaatc ttatctcatc cgccaaaaca ttacttttgg gctaaacaaa 60
taaatcg 67

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```

<210> 14
<211> 249
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Codon optimized polynucleotide sequence for Zven1

```

```

<400> 14
atggctgtta ttaccgggtgc ttgcgacaaa gactctcagt gtgggtggtg tatgtgctgc 60
gctgtttcta tctgggttaa atctatccgt atctgcactc ctatgggtaa actgggtgac 120
tcttgccatc cgctgactcg taaagttccg ttcttcgggc gtcgtatgca tcacacctgt 180
ccgtgcctgc cgggtctggc ttgcctgcgt acctctttca accgtttcat ttgcctggct 240
cagaagtaa 249

```

```

<210> 15
<211> 79
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Oligonucleotide primer ZC45,048

```

```

<400> 15
agtcaatgga tgacaagaat cacccaactt acccatagga gtacaaattc tgatagactt 60

```

aacccaaata gaaacagca

79

<210> 16
 <211> 77
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide primer ZC45049

<400> 16
 ttcttgtcat ccattgacta gaaaggttcc attctttggg agaaggatgc atcacacttg 60
 tccatgtttg ccagggt 77

<210> 17
 <211> 70
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide primer ZC45050

<400> 17
 ttacttttga gccaaacaaa tgaatctggt gaaagaagtt ctcaaacaag ccaaactgg 60
 caaacatgga 70

<210> 18
 <211> 68
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide primer ZC45051

<400> 18
 attactgggtg cttgtgataa ggattctcaa tgtgggtggg gtatgtgttg tgctgtttct 60
 atttgggt 68

<210> 19
 <211> 65
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide primer ZC45052

<400> 19
 ttatcacaag caccagtaat aacagcagca tcaccggctc ttggagtcaa caacaatgg 60
 ggcaa 65

<210> 20
 <211> 59
 <212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer ZC45053

<400> 20

atgagatcctt tgtgtttgtgc tccattgttg ttgttgttgt tgttgccacc attgttgtt 59

<210> 21

<211> 1182

<212> DNA

<213> Homo sapiens

<400> 21

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tctgtgctca accctcatgg agcccatgcc acttccttcc cattcaactt cagctacagc 120
gactatgata tgccttttggg tgaagatgag gatgtgacca attccaggac gttcctttgt 180
gccaagattg tcattgggat ggccctgggtg ggcatcatgc tgggtctgagg cattggaaac 240
ttcatcttta tcgctgccct ggtccgctac aagaaactgc gcaacctcac caacctgctc 300
atcgccaacc tggccatctc tgacttcctg gtggccattg tctgctgccc ctttgagatg 360
gactactatg tgggtgcgcca gctctcctgg gagcacggcc acgtcctgtg cacctctgtc 420
aactacctgc gcactgtctc tctctatgtc tccaccaatg ccctgctggc catcgccatt 480
gacaggtatc tggctattgt ccatccgctg agaccacgga tgaagtgcc aacagccact 540
ggcctgattg ccttgggtgtg gacggtgtcc atcctgatcg ccatcccttc cgcctacttc 600
accaccgaga cggtcctcgt cattgtcaag agccaggaaa agatcttctg cggccagatc 660
tggcctgtgg accagcagct ctactacaag tctacttcc tctttatctt tggcatagaa 720
ttcgtggggc ccgtgggtcac catgacctg tgctatgcca ggatctcccg ggagctctgg 780
ttcaaggcgg tccctggatt ccagacagag cagatccgca agaggctgag ctgccgcagg 840
aagacgggtc tgggtgctcat gtgcatcctc accgcctacg tgctatgctg ggcgcccttc 900
tacggcttca ccatcgctgcg cgacttcttc cccaccgtgt ttgtgaagga gaagcactac 960
ctcactgcct tctacatcgt cgagtgcac gccatgagca acagcatgat caacactctg 1020
tgcttcgtga ccgtcaagaa cgacaccgtc aagtacttca aaaagatcat gttgctccac 1080
tggaaggctt cttacaatgg cggtaatgcc agtgagacc tggacctcaa gacaattggg 1140
atgcctgcca ccgaagaggt ggactgcac agactaaaaa aa 1182
```

<210> 22

<211> 1155

<212> DNA

<213> Homo sapiens

<400> 22

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atggcagccc agaatggaaa caccagtttc acacccaact ttaatccacc ccaagaccat 60
gcctcctccc tctcctttta cttcagttat ggtgattatg acctccctat ggatgaggat 120
gaggacatga ccaagacccg gaccttcttc gcagccaaga tcgtcattgg cattgcactg 180
gcaggcatca tgctgggtctg cggcatcggg aactttgtct ttatcgctgc cctcaccgcg 240
tataagaagt tgcgcaacct caccaatctg ctcatggcca acctggccat ctccgacttc 300
ctggtggcca tcatctgctg ccccttcgag atggactact acgtgggtacg gcagctctcc 360
tgggagcatg gccacgtgct ctgtgcctcc gtcaactacc tgcgcaccgt ctccctctac 420
gtctccacca atgccttgct ggccattgcc attgacagat atctcgccat cgttcacccc 480
ttgaaccac ggatgaatta tcaaacggcc tccttcttga tcgccttggg ctggatgggtg 540
tccattctca ttgccatccc atcggtttac tttgcaacag aaacggtcct ctttattgtc 600
aagagccagg agaagatctt ctgtggccag atctggcctg tggatcagca gctctactac 660
aagtcctact tctcttcat ctttgggtgtc gagttcgtgg gccctgtggg caccatgacc 720
ctgtgctatg ccaggatctc ccgggagctc tggttcaagg cagtccttgg gttccagacg 780
gagcagatc gcaagcgggt gcgctgccgc aggaagacgg tcttgggtgct catgtgcatt 840
ctcacggcct atgtgctgtg ctgggcaccc ttctacggtt tcaccatcgt tcgtgacttc 900
```

```

ttccccactg tgttcgtgaa ggaaaagcac tacctcactg ccttctacgt ggtcgagtgc 960
atcgccatga gcaacagcat gatcaacacc gtgtgcttcg tgacgggtcaa gaacaacacc 1020
atgaagtact tcaagaagat gatgctgctg cactggcgtc cctcccagcg ggggagcaag 1080
tccagtgtg accttgacct cagaaccaac ggggtgcccc ccacagaaga ggtggactgt 1140
atcaggctga agtga                                     1155

```

```

<210> 23
<211> 28
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Oligonucleotide primer ZC29463

```

```

<400> 23
ggaattcatg aggagcctgt gctgcgcc                                     28

```

```

<210> 24
<211> 31
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Oligonucleotide primer ZC29462

```

```

<400> 24
gctctagacc cttttgggct aaacaaataa a                                     31

```

```

<210> 25
<211> 348
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Expression sequence

```

```

<400> 25
atgaggagcc tgtgctgcgc cccactcctg ctctctttgc tgctgccgcc gctgctgctc 60
acgccccgcg ctgggggacgc cgccgtgatc accgggggctt gtgacaagga ctcccaatgt 120
ggtggaggca tgtgctgtgc tgctcagtac tgggtcaaga gcataaggat ttgcacacct 180
atgggcaaac tgggagacag ctgccatcca ctgactcgta aagttccatt ttttgggcgg 240
aggatgcata acacttgccc gtgtctgcca ggcttggcct gtttacggac ttcatttaac 300
cgatttattt gtttagccca aaagggtcta gaatacatgc cgatggac                                     348

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```

<210> 26
<211> 116
<212> PRT
<213> Artificial Sequence

```

```

<220>
<223> Expression sequence with Gly linker and
      Glu-Glu-tag

```

<400> 26

```

Met Arg Ser Leu Cys Cys Ala Pro Leu Leu Leu Leu Leu Leu Leu Pro
1      5      10      15
Pro Leu Leu Leu Thr Pro Arg Ala Gly Asp Ala Ala Val Ile Thr Gly
20      25      30
Ala Cys Asp Lys Asp Ser Gln Cys Gly Gly Gly Met Cys Cys Ala Val
35      40      45
Ser Ile Trp Val Lys Ser Ile Arg Ile Cys Thr Pro Met Gly Lys Leu
50      55      60
Gly Asp Ser Cys His Pro Leu Thr Arg Lys Val Pro Phe Phe Gly Arg
65      70      75      80
Arg Met His His Thr Cys Pro Cys Leu Pro Gly Leu Ala Cys Leu Arg
85      90      95
Thr Ser Phe Asn Arg Phe Ile Cys Leu Ala Gln Lys Gly Leu Glu Tyr
100     105     110
Met Pro Met Asp
115

```

<210> 27

<211> 393

<212> PRT

<213> Homo sapiens

<400> 27

```

Met Glu Thr Thr Met Gly Phe Met Asp Asp Asn Ala Thr Asn Thr Ser
1      5      10      15
Thr Ser Phe Leu Ser Val Leu Asn Pro His Gly Ala His Ala Thr Ser
20      25      30
Phe Pro Phe Asn Phe Ser Tyr Ser Asp Tyr Asp Met Pro Leu Asp Glu
35      40      45
Asp Glu Asp Val Thr Asn Ser Arg Thr Phe Phe Ala Ala Lys Ile Val
50      55      60
Ile Gly Met Ala Leu Val Gly Ile Met Leu Val Cys Gly Ile Gly Asn
65      70      75      80
Phe Ile Phe Ile Ala Ala Leu Val Arg Tyr Lys Lys Leu Arg Asn Leu
85      90      95
Thr Asn Leu Leu Ile Ala Asn Leu Ala Ile Ser Asp Phe Leu Val Ala
100     105     110
Ile Val Cys Cys Pro Phe Glu Met Asp Tyr Tyr Val Val Arg Gln Leu
115     120     125
Ser Trp Glu His Gly His Val Leu Cys Thr Ser Val Asn Tyr Leu Arg
130     135     140
Thr Val Ser Leu Tyr Val Ser Thr Asn Ala Leu Leu Ala Ile Ala Ile
145     150     155     160
Asp Arg Tyr Leu Ala Ile Val His Pro Leu Arg Pro Arg Met Lys Cys
165     170     175
Gln Thr Ala Thr Gly Leu Ile Ala Leu Val Trp Thr Val Ser Ile Leu
180     185     190
Ile Ala Ile Pro Ser Ala Tyr Phe Thr Thr Glu Thr Val Leu Val Ile
195     200     205
Val Lys Ser Gln Glu Lys Ile Phe Cys Gly Gln Ile Trp Pro Val Asp
210     215     220
Gln Gln Leu Tyr Tyr Lys Ser Tyr Phe Leu Phe Ile Phe Gly Ile Glu
225     230     235     240
Phe Val Gly Pro Val Val Thr Met Thr Leu Cys Tyr Ala Arg Ile Ser
245     250     255

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Arg Glu Leu Trp Phe Lys Ala Val Pro Gly Phe Gln Thr Glu Gln Ile
    260                      265                      270
Arg Lys Arg Leu Arg Cys Arg Arg Lys Thr Val Leu Val Leu Met Cys
    275                      280                      285
Ile Leu Thr Ala Tyr Val Leu Cys Trp Ala Pro Phe Tyr Gly Phe Thr
    290                      295                      300
Ile Val Arg Asp Phe Phe Pro Thr Val Phe Val Lys Glu Lys His Tyr
    305                      310                      315                      320
Leu Thr Ala Phe Tyr Ile Val Glu Cys Ile Ala Met Ser Asn Ser Met
    325                      330                      335
Ile Asn Thr Leu Cys Phe Val Thr Val Lys Asn Asp Thr Val Lys Tyr
    340                      345                      350
Phe Lys Lys Ile Met Leu Leu His Trp Lys Ala Ser Tyr Asn Gly Gly
    355                      360                      365
Lys Ser Ser Ala Asp Leu Asp Leu Lys Thr Ile Gly Met Pro Ala Thr
    370                      375                      380
Glu Glu Val Asp Cys Ile Arg Leu Lys
    385                      390

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<210> 28
<211> 384
<212> PRT
<213> Homo sapiens

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<400> 28
Met Ala Ala Gln Asn Gly Asn Thr Ser Phe Thr Pro Asn Phe Asn Pro
  1          5          10          15
Pro Gln Asp His Ala Ser Ser Leu Ser Phe Asn Phe Ser Tyr Gly Asp
    20          25          30
Tyr Asp Leu Pro Met Asp Glu Asp Glu Asp Met Thr Lys Thr Arg Thr
    35          40          45
Phe Phe Ala Ala Lys Ile Val Ile Gly Ile Ala Leu Ala Gly Ile Met
    50          55          60
Leu Val Cys Gly Ile Gly Asn Phe Val Phe Ile Ala Ala Leu Thr Arg
    65          70          75          80
Tyr Lys Lys Leu Arg Asn Leu Thr Asn Leu Leu Ile Ala Asn Leu Ala
    85          90          95
Ile Ser Asp Phe Leu Val Ala Ile Ile Cys Cys Pro Phe Glu Met Asp
    100         105         110
Tyr Tyr Val Val Arg Gln Leu Ser Trp Glu His Gly His Val Leu Cys
    115         120         125
Ala Ser Val Asn Tyr Leu Arg Thr Val Ser Leu Tyr Val Ser Thr Asn
    130         135         140
Ala Leu Leu Ala Ile Ala Ile Asp Arg Tyr Leu Ala Ile Val His Pro
    145         150         155         160
Leu Lys Pro Arg Met Asn Tyr Gln Thr Ala Ser Phe Leu Ile Ala Leu
    165         170         175
Val Trp Met Val Ser Ile Leu Ile Ala Ile Pro Ser Ala Tyr Phe Ala
    180         185         190
Thr Glu Thr Val Leu Phe Ile Val Lys Ser Gln Glu Lys Ile Phe Cys
    195         200         205
Gly Gln Ile Trp Pro Val Asp Gln Gln Leu Tyr Tyr Lys Ser Tyr Phe
    210         215         220
Leu Phe Ile Phe Gly Val Glu Phe Val Gly Pro Val Val Thr Met Thr
    225         230         235         240
Leu Cys Tyr Ala Arg Ile Ser Arg Glu Leu Trp Phe Lys Ala Val Pro
    245         250         255

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Gly	Phe	Gln	Thr	Glu	Gln	Ile	Arg	Lys	Arg	Leu	Arg	Cys	Arg	Arg	Lys
			260					265					270		
Thr	Val	Leu	Val	Leu	Met	Cys	Ile	Leu	Thr	Ala	Tyr	Val	Leu	Cys	Trp
		275					280					285			
Ala	Pro	Phe	Tyr	Gly	Phe	Thr	Ile	Val	Arg	Asp	Phe	Phe	Pro	Thr	Val
	290					295					300				
Phe	Val	Lys	Glu	Lys	His	Tyr	Leu	Thr	Ala	Phe	Tyr	Val	Val	Glu	Cys
305					310					315					320
Ile	Ala	Met	Ser	Asn	Ser	Met	Ile	Asn	Thr	Val	Cys	Phe	Val	Thr	Val
				325					330					335	
Lys	Asn	Asn	Thr	Met	Lys	Tyr	Phe	Lys	Lys	Met	Met	Leu	Leu	His	Trp
			340					345					350		
Arg	Pro	Ser	Gln	Arg	Gly	Ser	Lys	Ser	Ser	Ala	Asp	Leu	Asp	Leu	Arg
		355					360					365			
Thr	Asn	Gly	Val	Pro	Thr	Thr	Glu	Glu	Val	Asp	Cys	Ile	Arg	Leu	Lys
	370					375					380				

<210> 29

<211> 129

<212> PRT

<213> Homo sapiens

<400> 29

Met	Arg	Ser	Leu	Cys	Cys	Ala	Pro	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Pro
1				5				10						15	
Pro	Leu	Leu	Leu	Thr	Pro	Arg	Ala	Gly	Asp	Ala	Ala	Val	Ile	Thr	Gly
			20					25					30		
Ala	Cys	Asp	Lys	Asp	Ser	Gln	Cys	Gly	Gly	Gly	Met	Cys	Cys	Ala	Val
		35				40						45			
Ser	Ile	Trp	Val	Lys	Ser	Ile	Arg	Ile	Cys	Thr	Pro	Met	Gly	Lys	Leu
	50					55					60				
Gly	Asp	Ser	Cys	His	Pro	Leu	Thr	Arg	Lys	Asn	Asn	Phe	Gly	Asn	Gly
65					70					75					80
Arg	Gln	Glu	Arg	Arg	Lys	Arg	Lys	Arg	Ser	Lys	Arg	Lys	Lys	Glu	Val
				85					90					95	
Pro	Phe	Phe	Gly	Arg	Arg	Met	His	His	Thr	Cys	Pro	Cys	Leu	Pro	Gly
			100					105					110		
Leu	Ala	Cys	Leu	Arg	Thr	Ser	Phe	Asn	Arg	Phe	Ile	Cys	Leu	Ala	Gln
		115					120					125			

Lys